TAKE A TABLET: A NEW TOOL FOR ASSESSING SEXUAL INTEREST

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WHAT AM I GOING TO TALK ABOUT?

- Why sex interest research?
- Sex interest measures & evaluation
- Introduction of a new measure
- Testing and evaluation of a new measure
- Future directions

WHY SEX INTEREST RESEARCH?

- Not greatly researched in terms of typical sexuality
- Important and current!
  - Marriage equality in the UK in March 2014 & USA in June 2015
- Extrapolation to deviant sexual interest
  - Single strongest predictor of sexual offense recidivism, especially in CSOs (Kanters et al., 2014)
  - Exclusive paedophilic preference?
  - Accurate and reliable measurement to aid management and treatment

CURRENT SEX INTEREST MEASURES

- **Subjective**
  - Questionnaires
  - Card Sorts
  - Interviews
- **Objective**
  - Phallometry (PPG)
  - Thermography
  - Heart Rate/Galvanic Skin Response
  - Pupillometry
  - Eye-tracking (& viewing time)
- **Indirect**
  - Implicit Associations Test (IAT)
  - Implicit Relational Assessment Procedure (IRAP)
  - Choice Reaction Time (CRT)
  - Rapid Serial Visual Processing (RSVP)
  - Emotional Stroop

EVALUATION OF SEX INTEREST MEASURES

SUBJECTIVE

- Influenced by observer's personal judgement.
- Open to interpretation and opinion.

Rich and detailed information

Assumes the information required is consciously accessible *(Snowden et al., 2011)* – sexuality is complex!

Sensitive topic, so prone to socially desirable responding *(Meston et al., 1998)* – SOs have an incentive to distort the truth!

OBJECTIVE

- Involves impartial measurement, that is, without bias or prejudice.
- Not subject to personal opinion.

Penile Plethysmography (PPG) - Measures penile blood flow in response to stimuli using a rubber gauge

PPG is the current 'gold standard' in sexuality research *(Fromberger et al., 2012)*

Very invasive and in some countries (e.g. Germany) it is seen as unethical so is prohibited *(Babchishin et al., 2013)*

Assuming that erection equates to sexual arousal – not always the case! *(Janssen et al., 2008)*

Prone to faking behaviours! *(Trottier et al., 2014)*

OBJECTIVE

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Eye-Tracking - Used to estimate an individual's gaze direction *(Weigle & Banks, 2008)* from a video image of the participant's face *(Drewes, 2010)*

Individuals less likely to decline vs. PPG *(Rieger & Savin-Williams, 2012)*

Comparable data because from the same organ (the eye)

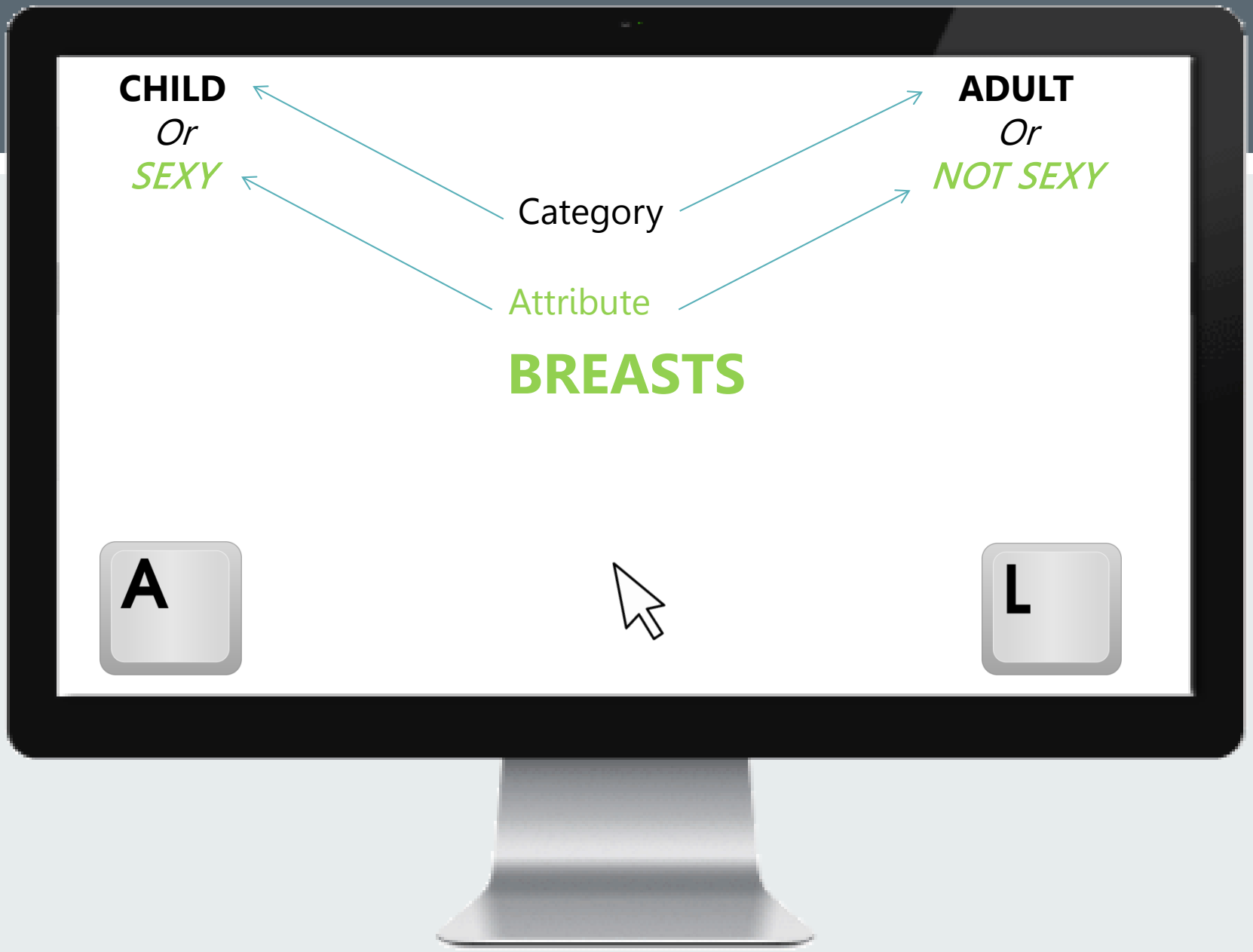
Individuals may be able to manipulate their eye-gaze – eye-tracker awareness *(Risko & Kingstone, 2011)*

Eye-tracker awareness abolished after a period of time *(Nasiopoulos et al., 2014)* – free viewing stimuli (e.g. videos) may be the way forward

INDIRECT MEASURES

- Self-assesses an attribute based on another response *(De Houwer & Moors, 2010)*

IAT (Implicit Associations Task) based on the premise that RTs are faster for internally held beliefs; if two complimentary concepts are ascribed to the same computer key, you will be faster than two conflicting concepts


CHILD
Or
SEXY
ADULT
Or
NOT SEXY
Category
Attribute
BREASTS
A
L

INDIRECT MEASURES

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IAT (Implicit Associations Task) based on the premise that RTs are faster for internally held beliefs; if two complimentary concepts are ascribed to the same computer key, you will be faster than two conflicting concepts

Been shown to precisely identify sexuality *(Snowden et al., 2008)*

Association between children and sex cannot be said to be definitive proof of abnormal sex interest in children *(Snowden et al., 2011)*

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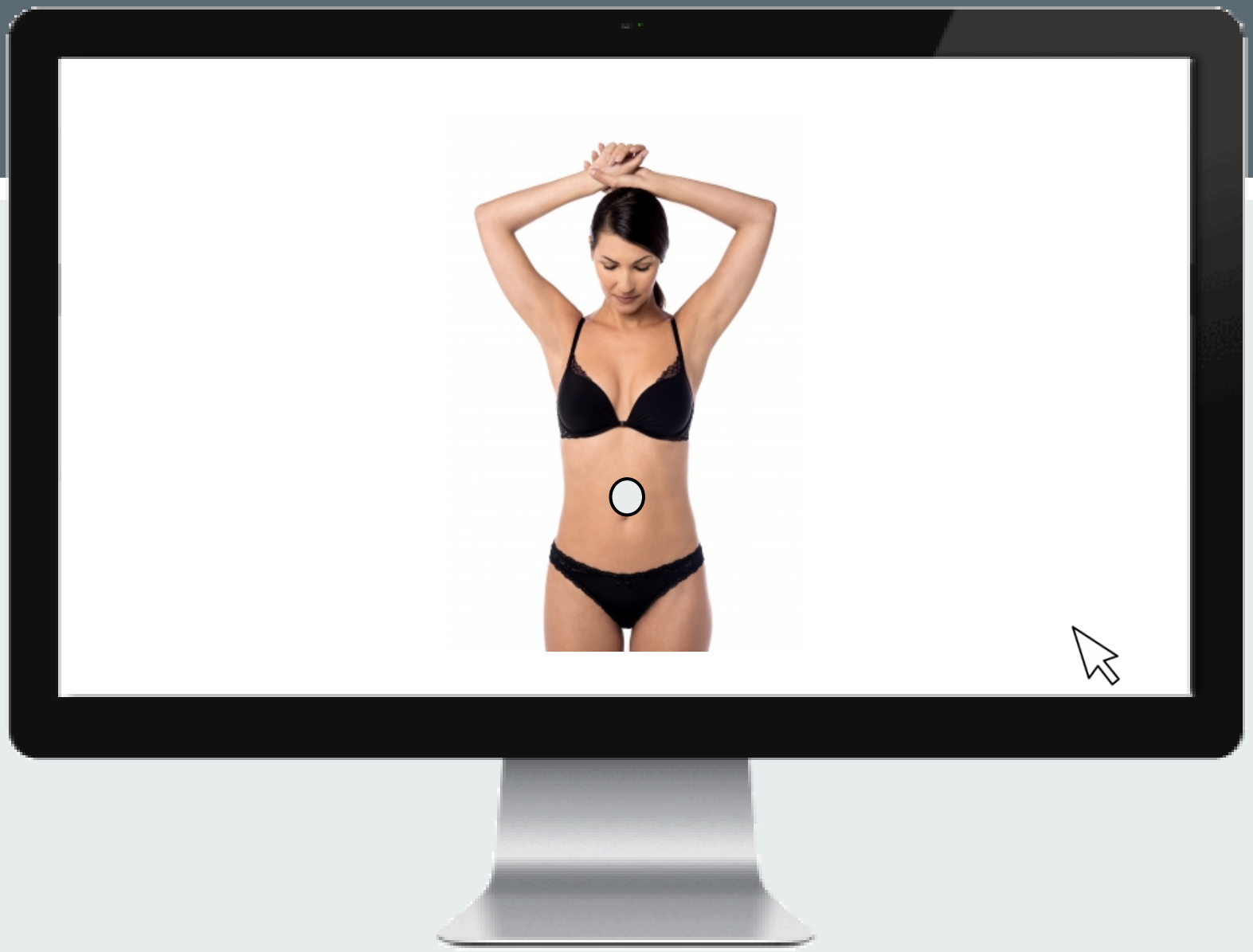
- Self-assesses an attribute based on another response *(De Houwer & Moors, 2010)*

CRT (Choice Reaction Time Task) uses SCID to assess sex interest by indicating the location of a dot on an image; longer RTs = greater attraction to the image



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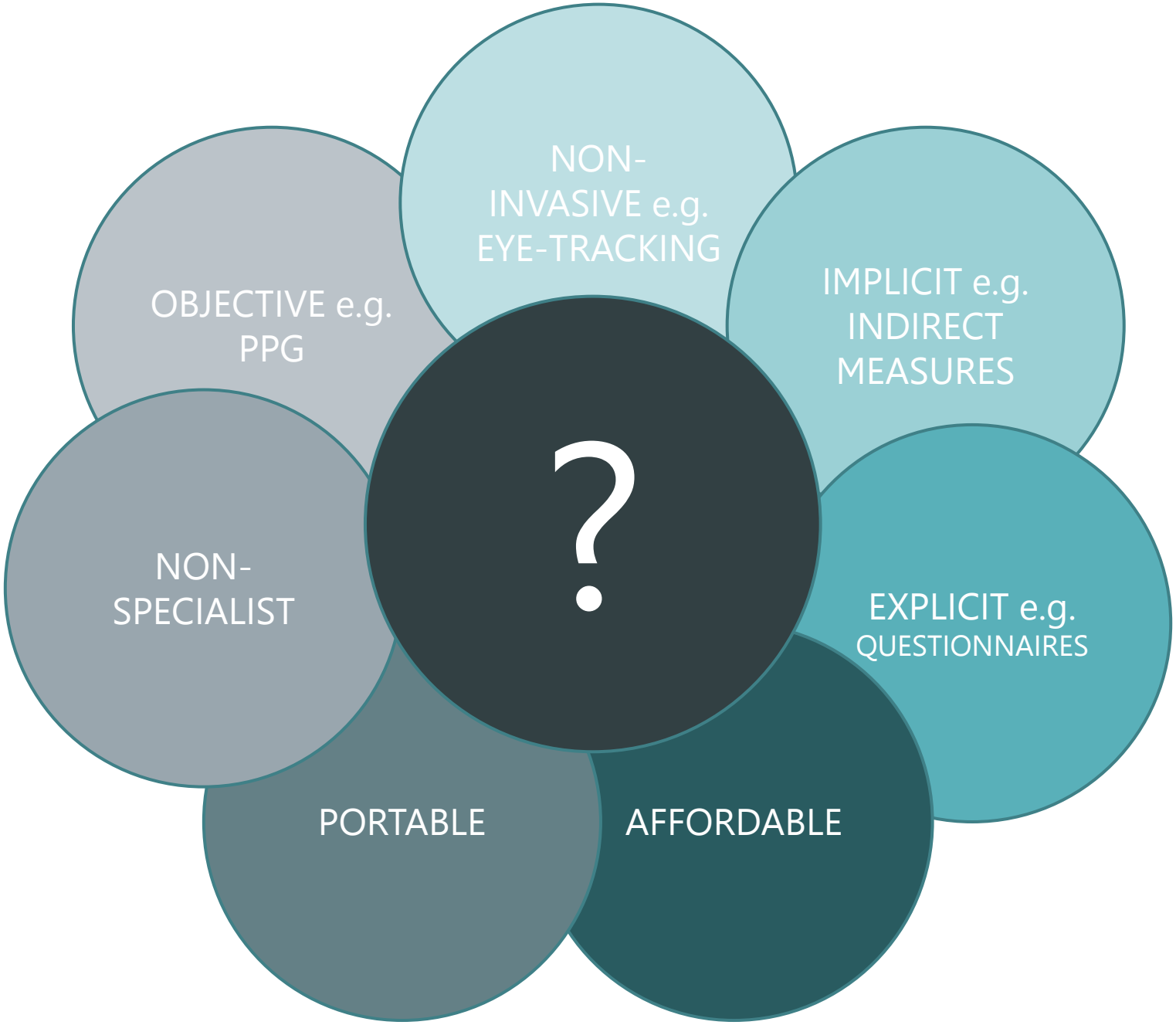
CRT (Choice Reaction Time Task) uses SCID to assess sex interest by indicating the location of a dot on an image; longer RTs = greater attraction to the image

Validated with heterosexual individuals *(Wright & Adams, 1994; Santtila et al., 2009)*

Only small number of studies exist, so may not be predictive of sexuality *(Snowden et al., 2011)*, and few studies using CRT with CSOs with Gress et al. (2013) finding no difference between CSOs and controls

SUMMARY

- Sex interest assessment isn't very good!
- Need a more comprehensive measure


NON-
INVASIVE e.g.
EYE-TRACKING
OBJECTIVE e.g.
PPG
IMPLICIT e.g.
INDIRECT
MEASURES
?
NON-
SPECIALIST
EXPLICIT e.g.
QUESTIONNAIRES
PORTABLE
AFFORDABLE

PROPOSAL OF A NEW MEASURE

TABLET-BASED MEASURE?

Tablet measure based on approach-avoidance procedures & embodied cognition

- Movements of the arm are related to an individual's evaluation i.e. 'pulling' associated with 'approaching' (Markman & Brendl, 2005)
- Individuals were faster at pulling movements for positive vs. negative words (Chen & Bargh, 1999)
  - Stimuli automatically classified as 'good' & 'bad' – ideal for use with CSOs who are likely to try to manipulate responses

SUPPORTING LITERATURE

Approach-Avoidance with Sex Interest

- Hofmann et al. (2009) investigated this in men and found individuals were faster to pull the joystick towards them when they were interested in the stimuli
  - Automatic approach-avoidance tendencies predicted uncontrolled sex interest behaviour = ideal as a sexuality measure, as uncontrolled behaviours are harder to manipulate!

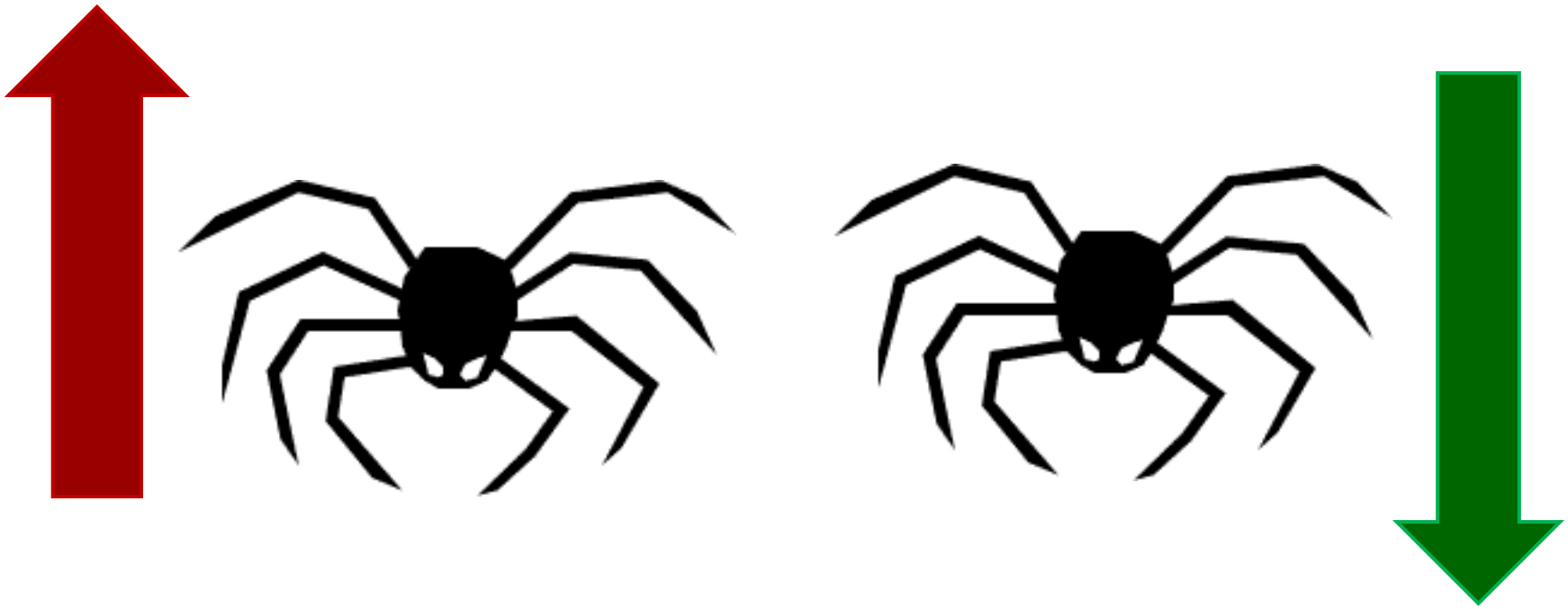
Swiping and Approach-Avoidance

- Kraus & Hofmann (2014) used SwAAP to assess approach-avoidance, but not with sexuality. Found that SwAAP was capable of assessing approach-avoidance tendencies, with further research being highly valuable

PREMISE

- ‘Swipe’ image towards or away from you to indicate like and dislike, respectively
- Faster RTs to pull ‘liked’ image towards you (‘approach’) and push ‘disliked’ image away (‘avoidance’) than the reverse

CONGRUENT **INCONGRUENT**



PILOT TESTING

METHOD

Participants

19 heterosexual only participants (6 male, 13 female)

Materials

Sexuality questionnaire with 3 sexuality measures

Samsung Galaxy Tab S running OpenSesame and 30 grayscaled catalogue model stimuli from 3 age groups (child, young adult, older adult)

Procedure

Counterbalanced across conditions

Practice phase & experimental phase

Around 30 minutes long, depending on participant response rate

DETAILS OF DATA ANALYSIS & RESULTS

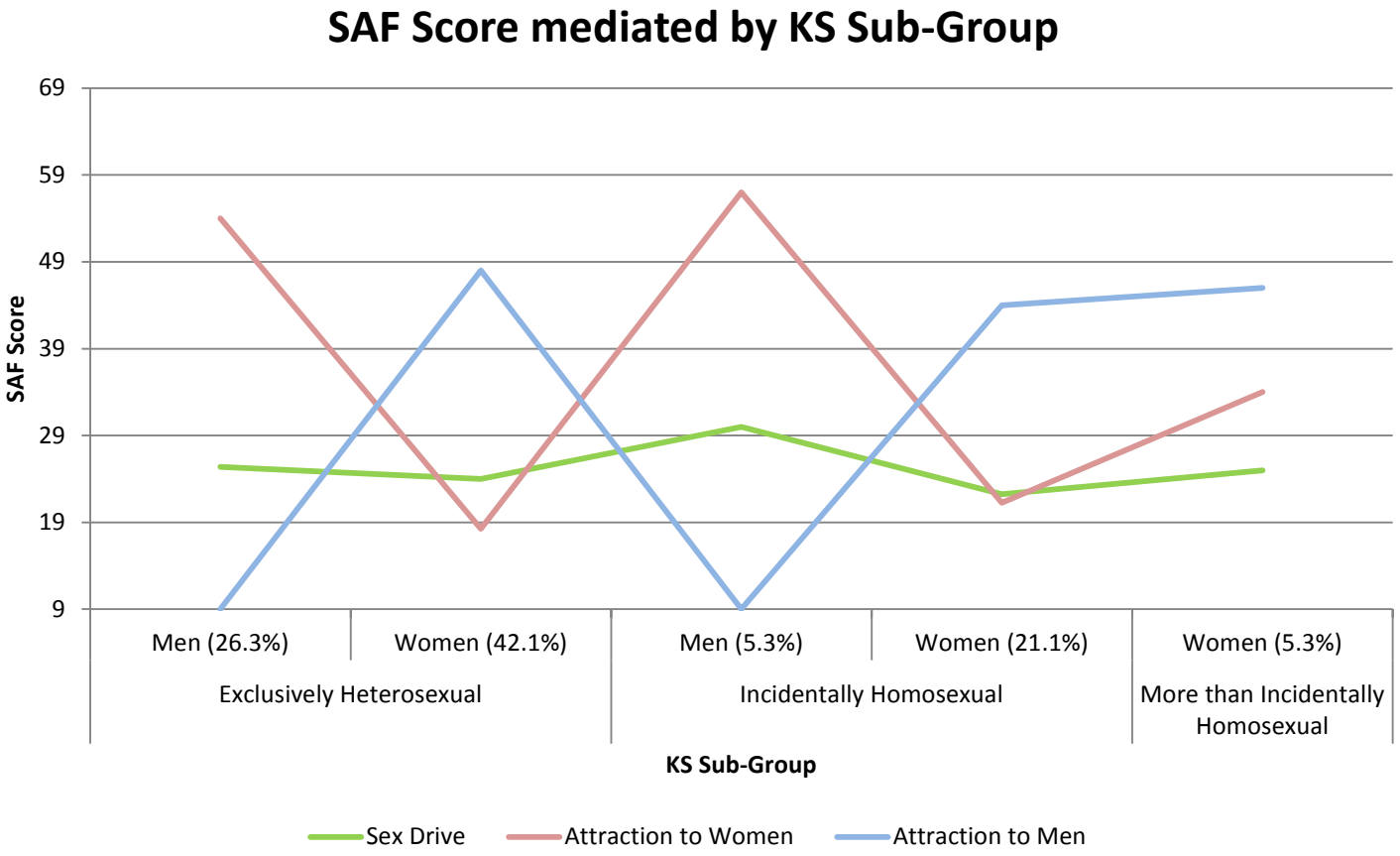
Repeated measures ANOVAs were conducted for each of the dependent variables:

- Swipe Speed
- Reaction Time
- Response Given
- Touch Data

And then paired samples t-tests were used for post-hoc analysis.

RESULTS!

QUESTIONNAIRE RESULTS

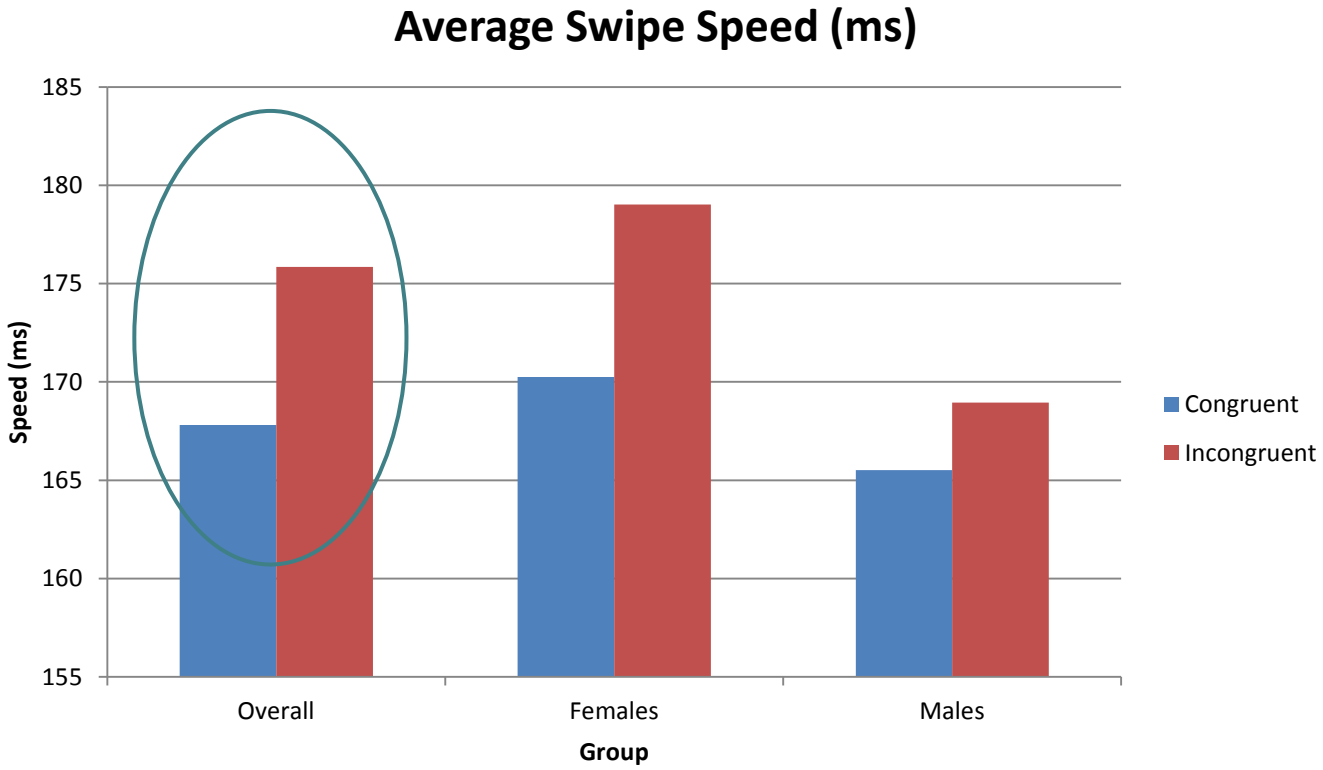


Differences for gender were significant for 'Attraction to Women' ($F(1, 14) = 129.006$, $p < .000$) and 'Attraction to Men' ($F(1, 14) = 104.008$, $p < .000$)
NS effect of gender on 'Sex Drive'
NS differences across KS

TABLET RESULTS

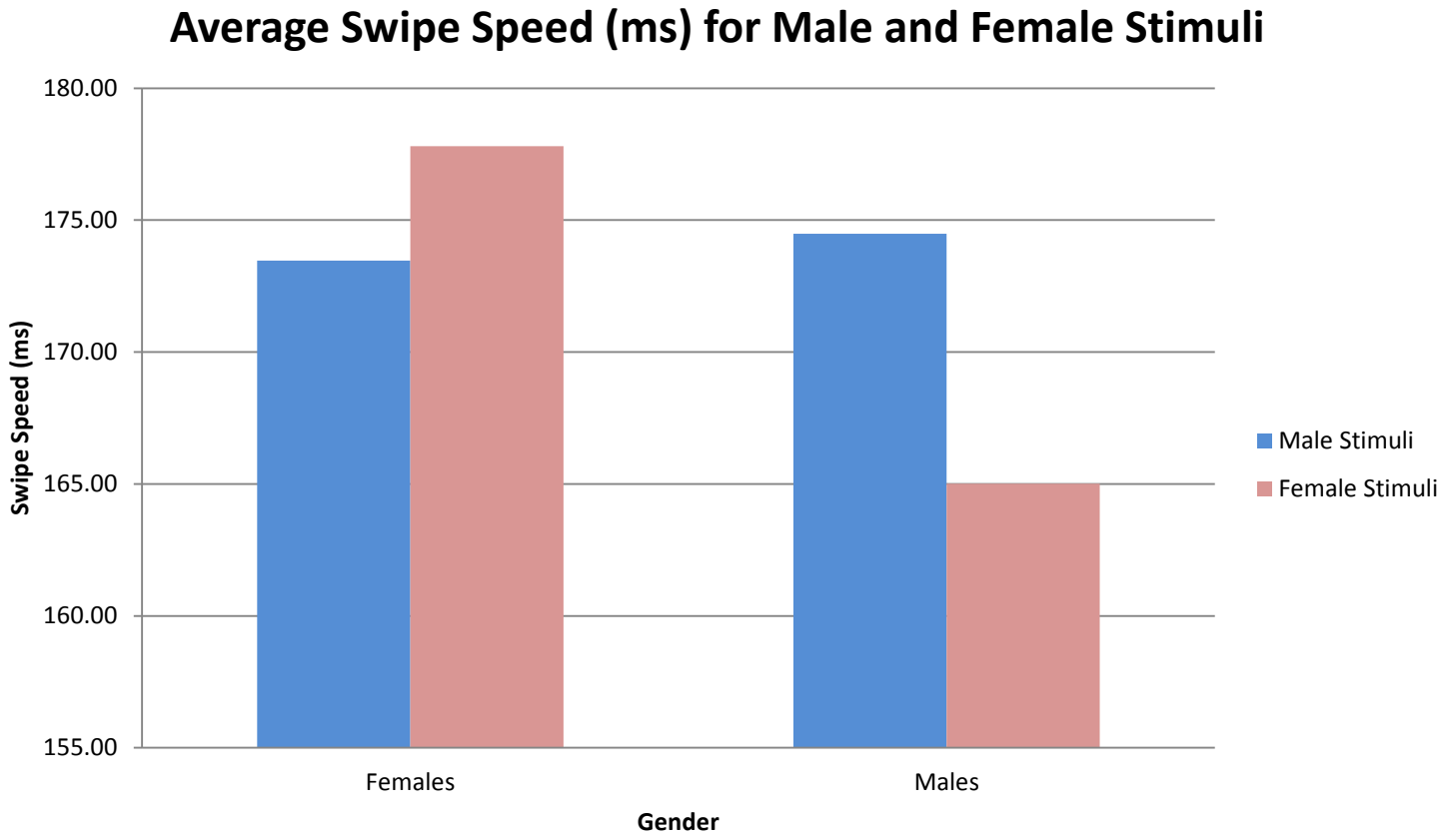
SWIPE SPEED

How fast, in ms, the participant ‘swipes’ the image after it has been presented to them on the screen.

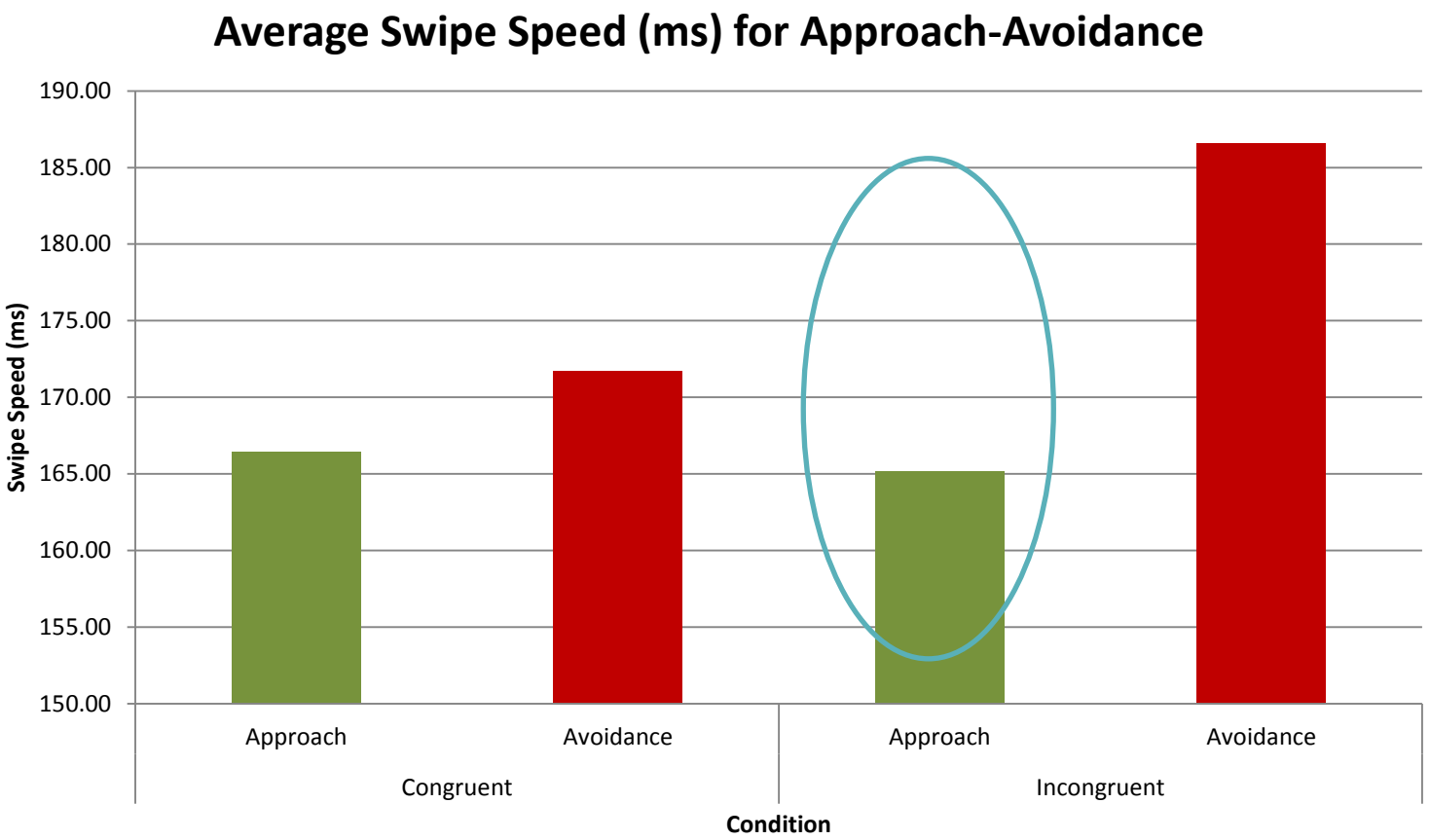


Effect of condition was significant ($F(1, 17) = 6.276$, $p < .05$

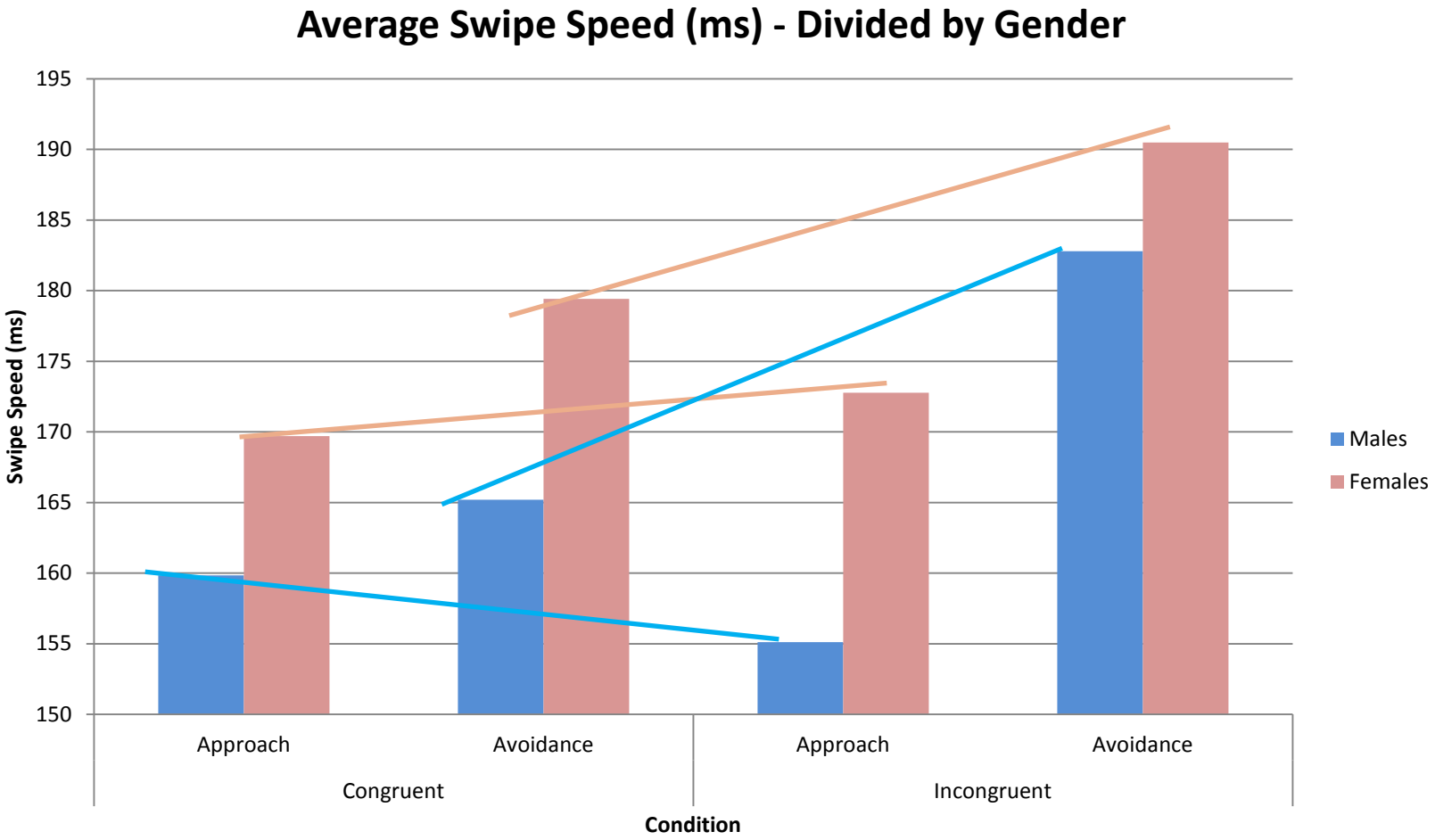
NS effect of gender!



Significant interaction for Picture Gender and Gender ($F(1, 17) = 84.201$, $p < .000$), meaning they were faster for preferred gender



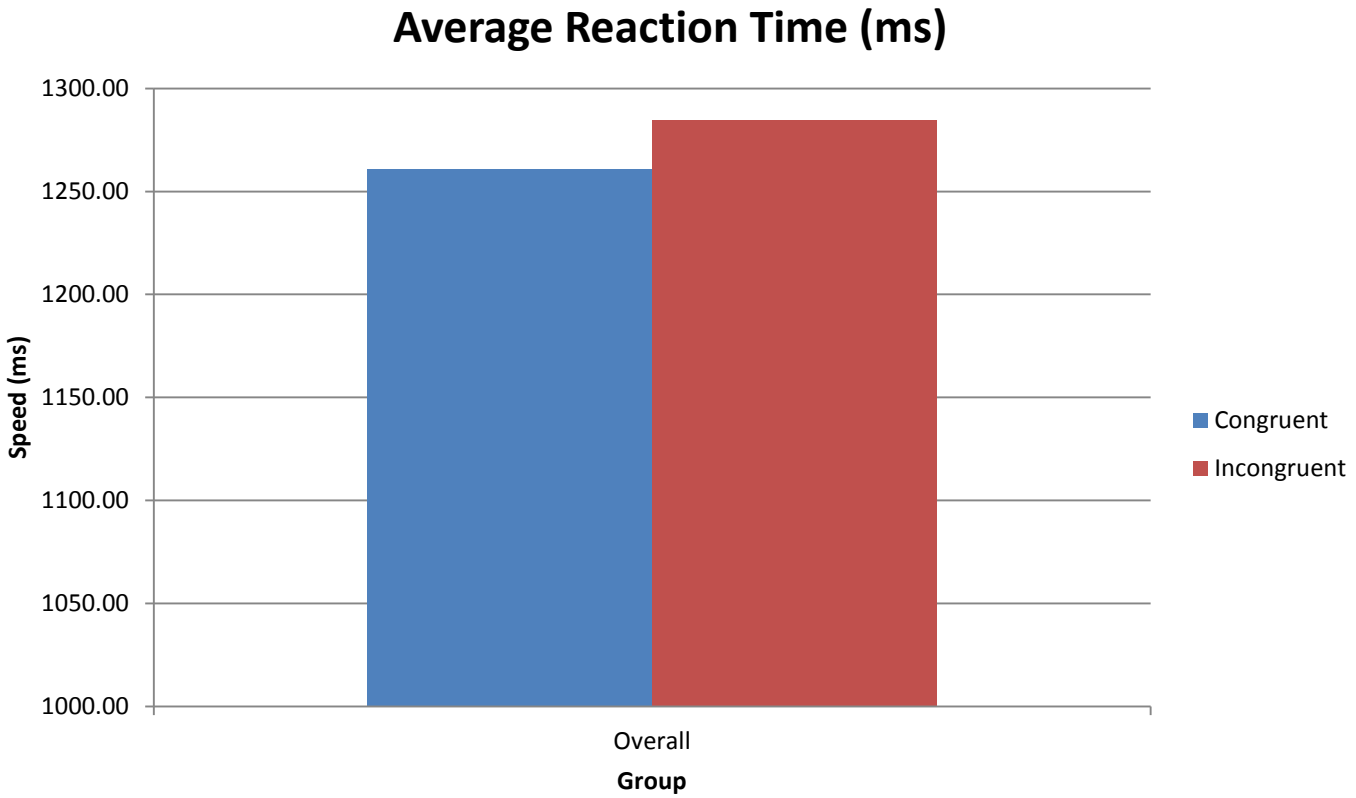
Paired samples t-test showed NS difference for *both* approach and avoidance



Males show <u>quicker</u> approach patterns in the incongruent condition, perhaps due to habituation

REACTION TIME ("*RT*")

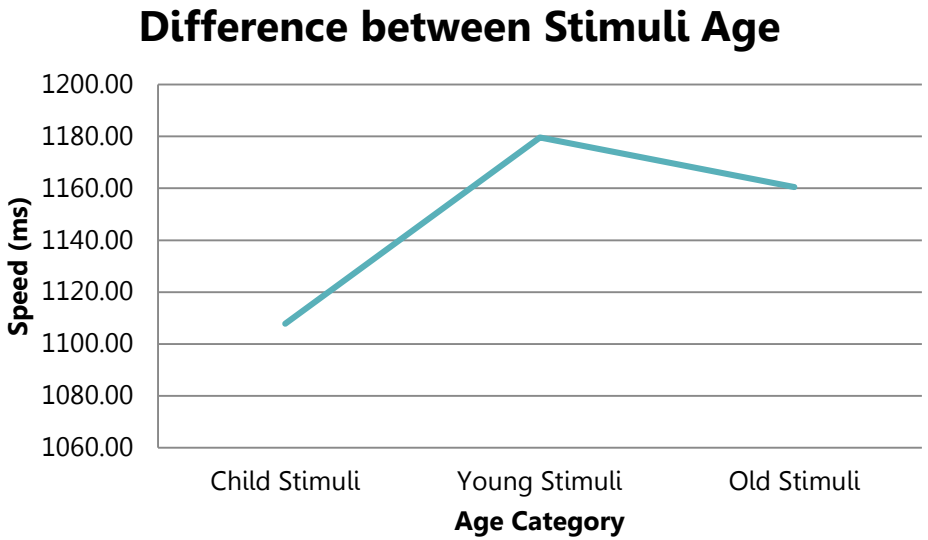
How fast, in ms, the participant reacts to the image presented on screen (from presentation to first touch).

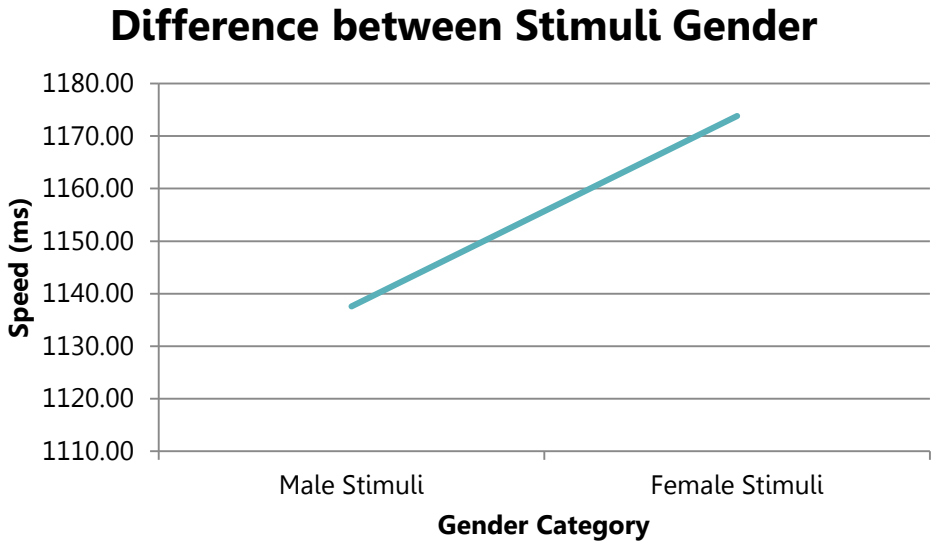


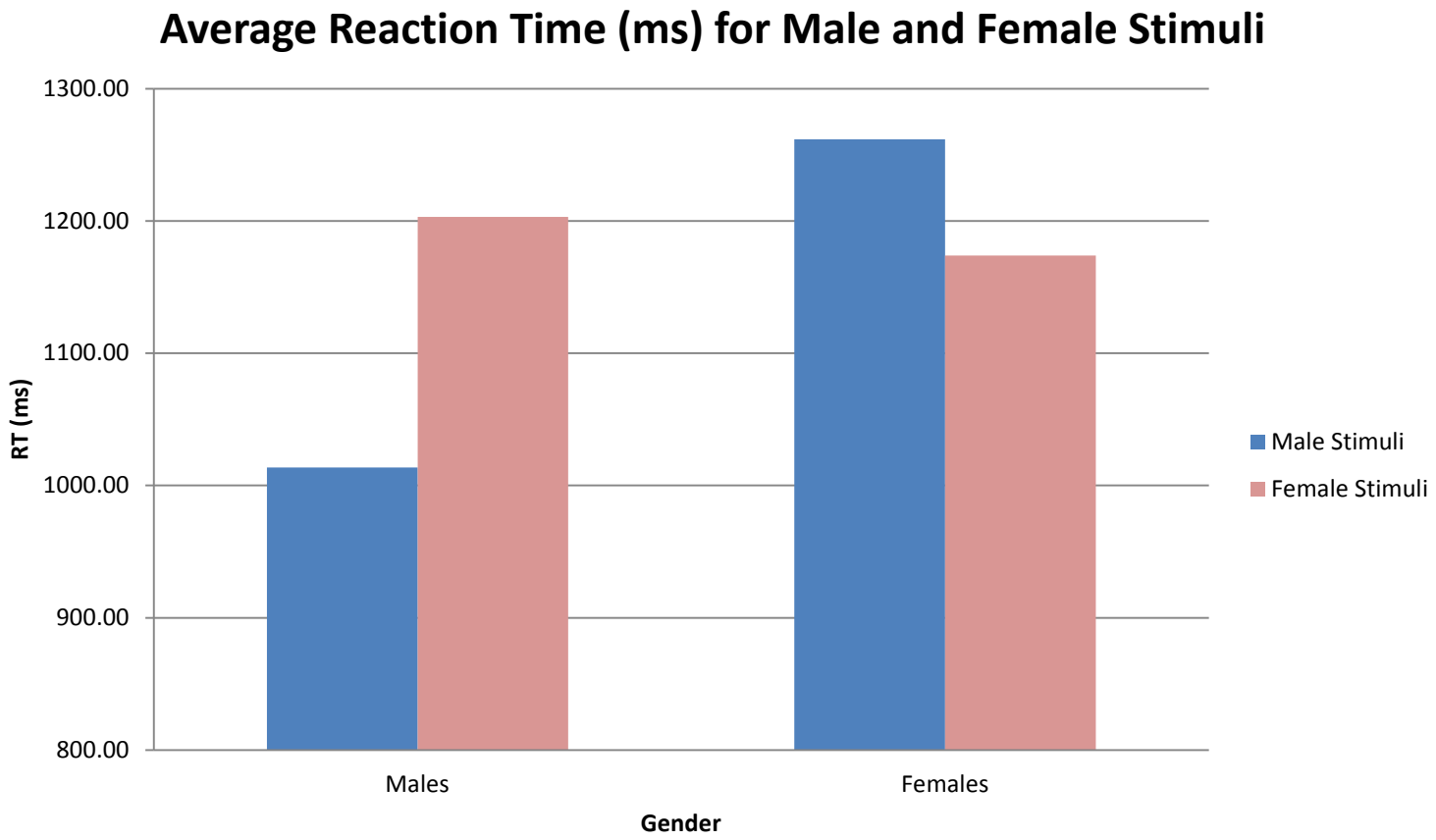
Condition was NS

Effect of picture age was significant (F (2, 34) = 18.496, p <.000

Effect of picture gender was significant (F (1,17) = 8.803, p < .005


Difference between Stimuli Age
1200.00
1180.00
1160.00
1140.00
1120.00
1100.00
1080.00
1060.00
Speed (ms)
Child Stimuli
Young Stimuli
Old Stimuli
Age Category


Difference between Stimuli Gender
1180.00
1170.00
1160.00
1150.00
1140.00
1130.00
1120.00
1110.00
Speed (ms)
Male Stimuli
Female Stimuli
Gender Category

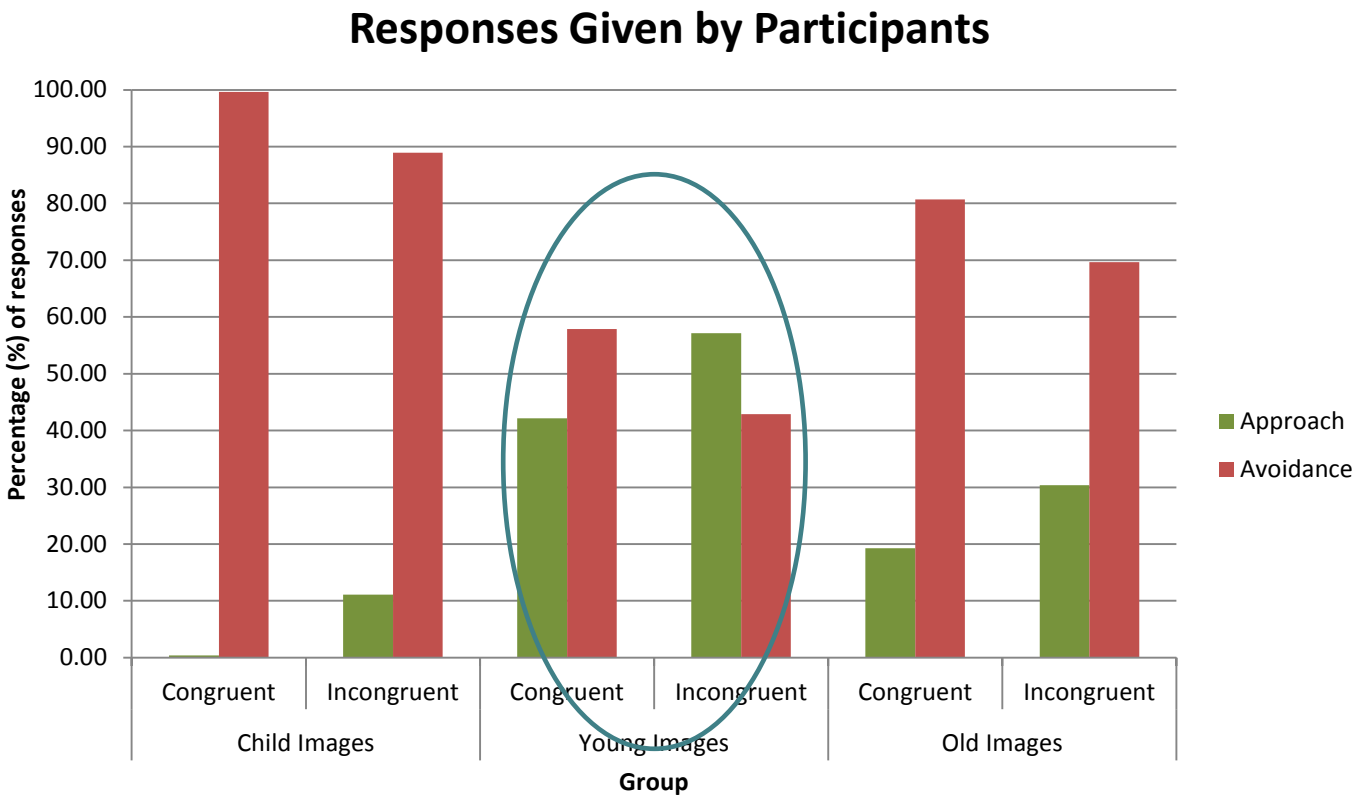


NS effect of gender, but significant interaction between Picture Gender and Participant Gender ($F(1,17) = 42.358$, $p < .000$

Perhaps because of SCID – delay in responding to sexually attractive stimuli

RESPONSE GIVEN

The ‘approach’ or ‘avoidance’ response given by the participant i.e. did they like it or not.

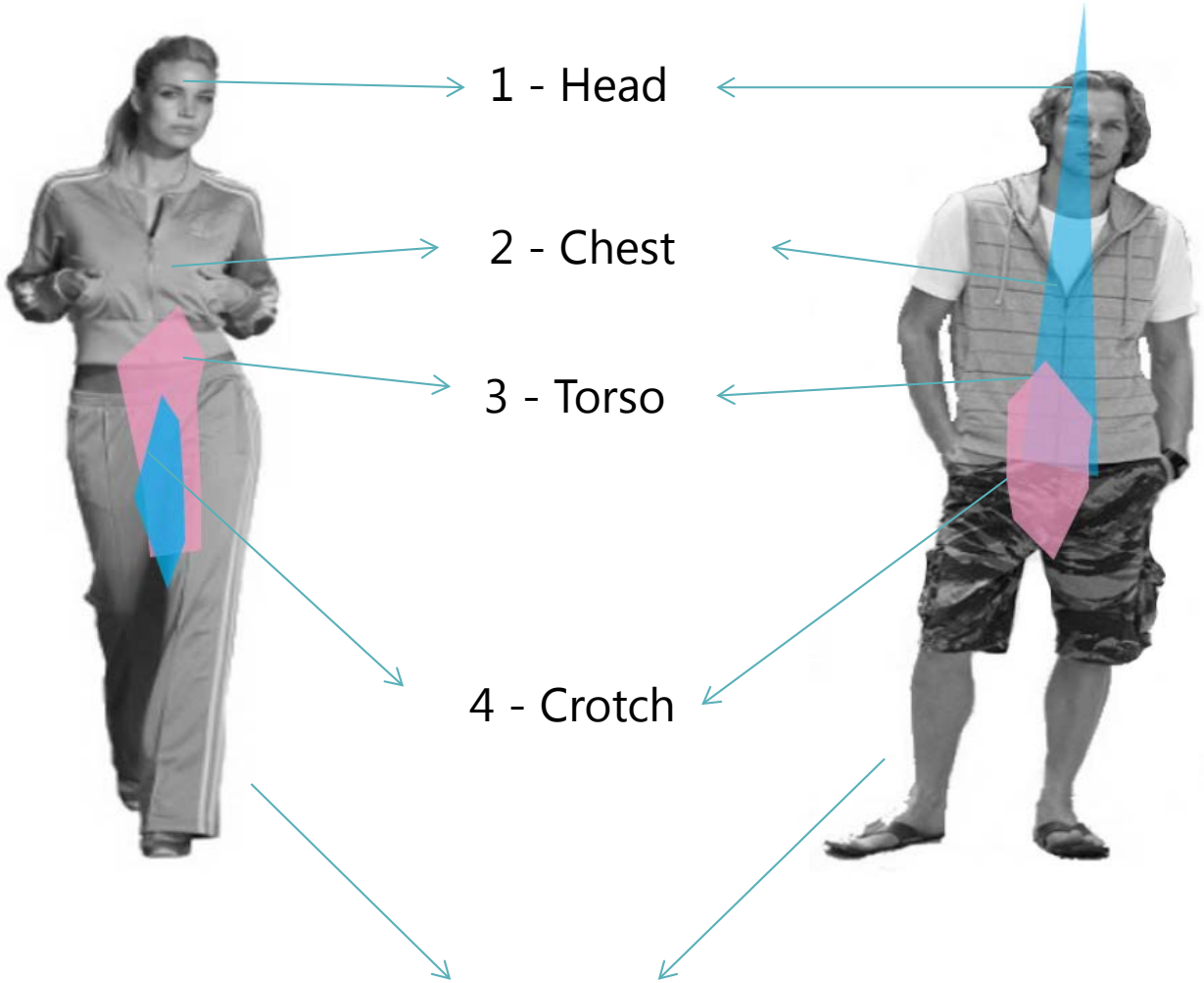


Overall, effect of condition was NS, meaning few errors were made

Effect of picture age was significant ($F(2, 34) = 26.884$, $p < .000$)

TOUCH DATA

Where on the image, in coordinates, the participant touches.


1 - Head
2 - Chest
3 - Torso
4 - Crotch
5 - Limbs

Female stimuli

Male stimuli

DISCUSSION

What have we learned?

- Men have an odd 'approach' pattern that is skewing the data
  - Sample size?
  - Conditioning – 67% males did congruent condition first vs. 38% women; faster as they had already seen the pictures?
- Slower RTs for preferred gender, possibly due to SCID, consistent with other research
- Young images 'approached' most and gained slowest RTs – most appropriate for the age group
- Men and women don't 'touch' images differently – this cannot distinguish sexual preferences
- **More testing needs to be done!**

FUTURE DIRECTIONS

- Currently recruiting for Part B of the pilot
  - Testing use age appropriate erotic and non-erotic images
  - Assessing for resilience to faking
    - Application to deviant sex interest
- Plans for the main study already in place
  - Large repeated measures design
  - Comparison between different, already-established sex interest measures

THANK YOU!

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